

FMXMA SERIES

Microprocessor Crystals

HC-49/U



- Low Cost Crystals
- Thru-Hole Package
- Multiple Package Heights
- Surface Mount Lead Forming

SPECIFICATIONS

08 - Issue 4 - 071508



Parameter	Specification
Frequency Range	1.8 - 180 MHz
Operation Mode	See Operation Mode and ESR Table
Load Capacitance (CL)	18 pF Std., 8 to 60 pF and Series available
Frequency Tolerance	±30 ppm @ 25°C Std. (See Cal. Tol. for Options)
Temperature Tolerance	±50 ppm Std. (See Temp. Tol. for Options)
Operating Temperature	0 to +70°C Std. (See Temp. Range for Options)
Storage Temperature	-55 to +125°C
Equivalent Series Resistance (ESR)	See Operation Mode and ESR Table
Shunt Capacitance (C0)	7 pF max.
Drive Level	50 µW typical, 1 mW max.
Aging @ 25°C	±5 ppm per year max.

All specifications subject to change without notice.

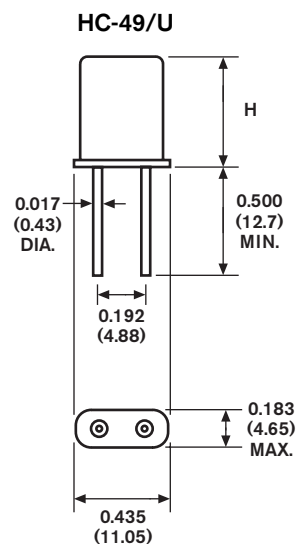
OPERATION MODE AND ESR TABLE

Frequency (MHz)	Mode	Max. ESR (Ohms)
1.8 - 1.9	Fundamental	650
2.0 - 2.3	Fundamental	550
2.4 - 2.9	Fundamental	350
3.0 - 3.6	Fundamental	200
3.7 - 4.1	Fundamental	100
4.2 - 4.8	Fundamental	70
4.9 - 5.9	Fundamental	50
6.0 - 7.9	Fundamental	40
8.0 - 9.9	Fundamental	35
10.0 - 27.0	Fundamental	25
24.0 - 29.0	3rd Overtone	60
30.0 - 80.0	3rd Overtone	40
50.0 - 99.0	5th Overtone	90
100.0 - 180.0	5th Overtone	110

STANDARD MARKING

XXX.XXXM
XXXXXXX
FMI YYWW

XXX.XXXM FREQUENCY in MHz
XXXXXXX Part Number
FMI, Date Code



DIMENSION "H" TABLE

Package	Max. Height
A1	0.530" (13.46mm)
A2	0.426" (10.82mm)

NOTE: Standard Specifications for product indicated in color

Dimensions: $\frac{\text{Inches}}{(\text{mm})}$

PART DESCRIPTION SYSTEM

FMXM A1 1 18 H J A - XX.XXXXXXM - CM

Product Family	Package	Mode	Load Cap. (CL)	Cal. Tol. @ 25°C	Temp. Tol.	Temp. Range	Frequency (MHz)	Options
MicroP Crystal	A1 or A2	1 - Fundamental 3 - 3rd Overtone 5 - 5th Overtone	18 - Standard (pF) 00 - Series ## - Custom (pF)	G ±25 ppm H ±30 ppm I ±40 ppm J ±50 ppm K ±100 ppm X Custom	G ±25 ppm H ±30 ppm I ±40 ppm J ±50 ppm K ±100 ppm X Custom	A 0 to 70 °C B -20 to 70 °C C -40 to 85 °C D -10 to 50 °C E -10 to 60 °C F -30 to 60 °C J 0 to 50 °C X Custom		TR - Tape & Reel BI - Base Insulator GB - Gnd Lead Base GT - Gnd Lead Top LT - Lead Trimming LF - Lead Forming PD - Parameter Data TD - Temp. Data TG - Temp. Grading CM - Custom Mark BLANK - None Req'd.

-55°C TO +125°C Available, Limited Stability Options, please consult the factory.